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TITLE: Longitudinal Risk and Resilience Factors Predicting Psychiatric Disruption,
Mental Health Service Utilization & Military Retention in OIF National Guard Troops

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1. INTRODUCTION

1.1. Background

Modern military operations have increasingly relied on National Guard and Reserve (NGR) troop deployments in peacekeeping and combat missions. As these conflicts persist, there have been considerable challenges in recruiting and maintaining sufficient numbers of trained military personnel, especially within the National Guard. The goal of this project is to identify psychosocial factors that predict post-deployment levels of mental health disruptions, mental health service utilization, and military retention and attrition over time. By learning about what predicts psychiatric problems and what hampers the use of psychiatric services, we can develop new ways to increase soldiers' resilience and recovery from combat-related distress, and thus, increase military retention.

1.2. Previous Work

Prior to this award, we surveyed a representative sample of 530 male and female Minnesota National Guard (MN NG) troops one month before their deployment to Iraq. Soldiers completed reliable and valid measures of mental health functioning and well-known risk factors for later psychological or psychiatric difficulties. The purpose of this project is to conduct a longitudinal study of pre-deployment risk and resilience factors predictive of post-deployment outcomes in this same cohort. Using a mailed survey methodology, this project assesses soldiers beginning two months after their return from Iraq, and again one and two years later. We will measure deployment experiences (such as combat exposure, other deployment-related stressors, perceptions of unit support, and use of in-theater combat stress interventions) and post-deployment psychiatric distress, quality-of-life, life stressors, mental health service utilization, and military retention/attrition over the course of two years. This project simultaneously addresses three critical areas of military relevance: the ongoing well-being of combat deployed troops, the use of in-theatre and post-deployment mental health services by these troops, and the retention and attrition of combat-deployed troops following their return. It employs a cutting edge prospective design to study a well-characterized, representative cohort of NG soldiers, with the full support and collaboration of the MN NG leadership. This study will generate important new knowledge that impacts the military readiness of troops.

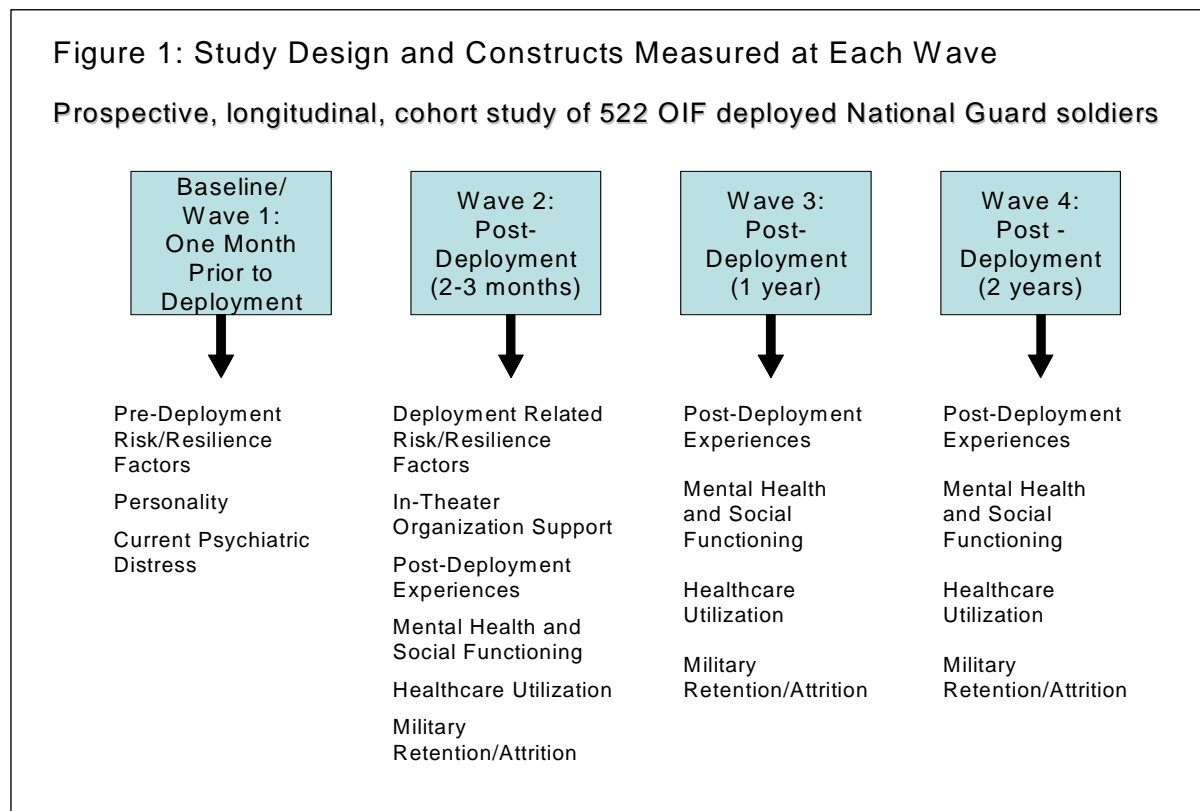
2. PROGRESS REPORT

This is the first annual report for project W81XWH-07-2-0033, covering the period of 15 March 2007 through 14 March 2008. We have successfully completed all tasks outlined in our approved Statement of Work for Year 1 of this project. The project is fully on track and progressing successfully without any notable problems. Briefly, we have completed all local Institutional Review Board and Department of Defense (DoD) regulatory documents necessary to launch **(Task 1)**, obtained all relevant IRB approvals **(Task 4)**, and submitted Continuing Review Reports in a timely manner. We have

established a Subject Tracking Database (**Task 2**) and implemented evidence-based longitudinal subject tracking methods into our research approach. Experienced and highly motivated research personnel were recruited and hired (**Task 3**), and important start up activities for the project were completed (**Task 5**). Finally, we successfully completed Wave 2 data collection (Baseline/Wave 1 data was collected prior to the start of this award in our preliminary work) from over 76% of our original cohort (**Task 6**). The report that follows provides a complete summary of our research accomplishments to date relevant to Year 1 of our Statement of Work.

2.1. Overview of the Project

The overall goal of this project is to conduct a 4-wave longitudinal cohort study (see Figure 1 below for illustration of the study design and summary of constructs to be measured at each wave). Prior to this award in March 2006, we gathered Baseline/Wave 1 survey data from a representative sample of 530 male and female MN NG troops one month before their deployment to Iraq. Soldiers completed reliable and valid measures of mental health functioning and well-known risk factors for later psychological or psychiatric difficulties. For this award, three additional waves of data will be collected. Much of our work in this first year of the project (period of 15 March 2007 through 14 March 2008) has focused on hiring research personnel and completing other project start up activities, establishing systems to ensure the future success of the longitudinal project, and gathering the first post-deployment (Wave 2) survey data. Wave 3 and 4 data collection are planned for subsequent years.



2.2. Pre-Award Phase Tasks

In our original grant application and approved Statement of Work, we anticipated the start date for this project to be 1 November 2006. However, the official start date for the project was pushed back four months to 15 March 2007. This delayed start did not impact our research timetable because members of the study cohort deployed in Iraq (1st Brigade Combat Team of the 34th Infantry Division) also received orders for a four month extension of their deployment. Due to this extension, troops returned home in between July and August of 2007. Upon notification of award, we began work on preparing local IRB and DoD regulatory documents and submitted for review **(Task 1)**. To accomplish this task, the team of research investigators and consultant worked to finalize the survey protocol and consent documents. Our National Guard collaborators (Colonel Michael Rath, Brigade Surgeon and Captain Cora Courage, Brigade Medical Officer) reviewed and provided consultation on the final protocol for readability and appropriateness of content and items based on their first hand “boots on the ground” experience on deployment with the study cohort. We obtained final approval of all protocols by the Minneapolis VAMC IRB, University of Minnesota IRB, and HSSRB **(Task 4)**.

An important Pre-Award Phase task of this project was the establishment of a Subject Tracking Database **(Task 2)**. All Baseline/Wave 1 pre-deployment data were checked, verified, and cleaned. In accomplishing this task, we discovered that one participant’s data had been entered twice, reducing our total sample from 531 to 530. Additionally, the data from 8 participants could not be linked with legible consent forms. Therefore, we chose to exclude those participants from our cohort, resulting in a total Baseline/Wave 1 cohort sample of 522.

2.3. Project Start Up

This research award required the recruitment and hiring of a Project Coordinator and Research Assistant (Tasks 3, 5). To accomplish this task, we conducted a national search posting announcements on major research listserves, the University of Minnesota Human Resources website, and Minneapolis VA Medical Center. Numerous applications were received and candidates were interviewed. We are fortunate to have hired Madhavi Reddy, M.A. (see CV in the appendices) as the Project Coordinator. Ms. Reddy is a doctoral candidate in clinical psychology at Northern Illinois University and a former pre-doctoral National Institutes of Mental Health (NIMH) trainee in family violence and sexual assault research. Her research interests are in the areas of posttraumatic stress disorder, negative consequences of trauma exposure, and mechanisms of resilience following trauma exposure. Ms. Reddy has experience designing and implementing research protocols, collecting and analyzing data, and publishing manuscripts. Her experience, knowledge, and strong organization skills have been invaluable to starting up the current project. Courtney Duffy, B.A. was hired as the project Research Assistant. Ms. Duffy graduated with distinction from the University of Wisconsin-Madison (see CV in the appendices). She has experience as a research assistant to Dr. Polusny (Principal Investigator) and Dr. Erbes (Co-Principal

Investigator) on previous projects which substantially benefited the start up of the current project. Specifically, Ms. Duffy has expertise in the design of scannable survey forms, and her knowledge of Teleform software has been valuable to the current project.

In addition to these two paid positions (Ms. Reddy and Ms. Duffy) dedicated to the current project, Dr. Polusny maintains an active research laboratory with an infrastructure of trained/supervised research assistants, pre-doctoral psychology interns, and post-doctoral fellows who have made significant unfunded contributions to this project. All research staff completed Good Clinical Practice and Human Studies Protection training prior to starting the project and have updated this training as needed **(Task 5)**. They remain in compliance with all rules and regulations set forth by the University of Minnesota Medical School and Minneapolis Veterans Affairs Medical Center (MVAMC). To maintain clear lines of communication and ensure the timely completion of tasks, the PI and research staff meet at least weekly for a project management meeting to discuss the progress of the study, review procedures, and implement training in project tasks as needed. The PI, Co-PI, Co-I's, and Statisticians meet weekly or more frequently as needed to discuss study progress, troubleshoot study challenges as they arise, and coordinate collaboration on dissemination activities.

Other project start up tasks completed in Year 1 included purchasing of computers, printer, Teleform software, and supplies; setting up budgeting system; and developing a participant incentives auditing system **(Task 5)**. In order to ensure that incentives used in this study were properly distributed to participants, an audit tracking system was implemented that involves careful checks by multiple independent staff. Either the PI or Co-PI witnessed all disbursements.

2.4. Implementation of Evidence-Based Longitudinal Subject Tracking Methods

Given that this project focuses on following up an existing cohort of NG soldiers who have already completed Time 1 baseline measures, maximizing subject retention is an important objective. While the existing study cohort has demonstrated a willingness to participate in research (e.g. by voluntarily completing the Baseline/Wave 1 survey before deploying to Iraq) and provided us with extensive contact information, we are aware that following up research participants longitudinally is challenging and requires careful planning. Selective attrition from longitudinal studies threatens both the internal and external validity of research findings (Ribisl, Walton, Mowbray, Luke, Davidson, & Bootsmiller, 1996; Cotter, Burke, Loeber, & Mutchka, 2005). Therefore, a critical Year 1 accomplishment was the implementation of well-established strategies and procedures for successful follow-up and retention of our study cohort over the course of the longitudinal project.

2.4.1. Military Collaboration. The successful implementation of longitudinal research starts with building effective community partnerships (Leonard, Lester, Rotheram-Borus, Mattes, Gwadz, & Ferns, 2003). Our research team has the strong support of the MN NG chain of command for this project and has maintained important

collaborative research relationships with key military personnel who were instrumental in facilitating the initial recruitment of the study cohort. Throughout the deployment of the 1/34 BCT in Iraq (beginning prior to the current reporting period), we maintained regular email and teleconference contact with our MN NG collaborators. These lines of communication provided our research team with a “boots on the ground” perspective of the cohort’s deployment experiences and guided finalization of survey items for Wave 2 data collection. As we learned of the extension of the 1/34 BCT in Iraq, we consulted with our MN NG collaborators on the brigades redeployment schedule and appropriately revised our data collection timelines accordingly.

2.4.2. Building Affiliation through Project Identity. Successful longitudinal studies also utilize strategies that establish a project identity and build project affiliation among



the study cohort (Leonard et al., 2003). To create a project identity, we established a project name, “Readiness and Resilience in National Guard Soldiers (RINGS) Study” and developed a simple project logo that appears on all project materials and follow-up correspondence. Our project logo, which consists of two interlocking “rings” inscribed with the words “Readiness” and “Resilience”, is shown in the box to the left. To further build affiliation and assist research personnel in obtaining current address information

using postal service address correction, every Wave 1 participant was sent a 2008 calendar with the project name and contact information (see below).

2.4.3. Systematic Subject Tracking Tool. We have been successful in tracking 99% of our cohort. To accomplish this, a cost-effective computerized subject tracking database was developed and used to facilitate follow-up with the cohort (**Task 2**). All Baseline/Wave 1 cohort participants provided detailed contact information as well as the names of two different people not living together who would “know where [the subject] is in the event that [the subject] is deployed or moves,” along with contact information for those two people. The subject tracking database contains this information linked with original ID# as well as information about survey status for each participant including dates of mailings, survey order, and survey receipt dates. Research personnel carefully updated this database at each project encounter with study participants. This database is not linked with participants’ survey responses, and the electronic file is stored on secure password protected restricted VA server with limited access permissions only to core personnel. The database was used to determine dates of future follow-up mailings and to calculate follow-up response rates.



2.4.4. Tracking Methods. Four main methods have been used to date in tracking participants. 1) “Return Service Requested” was printed on our mailing envelopes. This feature allows the post office to return mail that is to be forwarded with the new forwarding address, allowing us to update our database with the participant’s most recent address. Also, this feature notifies us if there is no new forwarding address, signifying that we should use another method to track an address. 2) A large majority of our participants were systematically enrolled with the Minneapolis VA Medical Center at the time of their return from deployment. Using VA administrative databases, our study personnel were able to access the address and phone number information provided by the participant at the time of enrollment. 3) As noted above, participants provided secondary contact information at the time of Baseline/Wave 1 pre-deployment data collection. In cases where we are unable to locate correct addresses, these people are contacted to learn the participant’s new address and phone number. 4) Many participants also provided email addresses at the time they completed the Baseline/Wave 1 survey, and we have utilized this to send participants a brief message indicating that we do not have their updated address information and request this information if they wish to continue in the study. Using these methods we have been extremely successful in tracking the most recent addresses and phone numbers for our cohort (99% of Wave 1 participants have been located at Wave 2).

2.5. Preparation of Survey Materials

During Months 3 through 5 of the current reporting period, materials for the Wave 2 data collection were prepared (**Task 6**), including initial recruitment/consent letters, reminder postcards, and mailing envelopes. Considerable effort was made to develop professional surveys in a computer readable format using Teleform Software (see example of survey page to the right).

In consultation with our survey methodology expert (Dr. Murdoch) and PTSD assessment expert (Dr. Litz), we reviewed the recent literature and determined that counterbalancing elements of the survey would control for any systematic order effects that may possibly occur. Latin square design provides a sufficient method of counterbalancing (Alimena, 1962). We employed this method of counterbalancing to construct our Wave 2 survey into 6 blocks or groups of questionnaires that were similar or assessed a shared construct. The six blocks tapped into the following domains: 1) perceptions of mental health and health care utilization, 2) combat experiences and risk and resilience factors, 3) unit characteristics, 4) coping skills, 5) stress reactions, and 6) social adjustment after deployment. Twelve orders were constructed and each of the 522 participants was randomly assigned to one of the

Readiness and Resilience in National Guard Soldiers (RRINGS) Study
(PI: Melissa Polusny, Ph.D.; Co-PI: Christopher Erbes, Ph.D.)

PLEASE TELL US ABOUT YOUR BACKGROUND AND EXPERIENCES

PART A: DEMOGRAPHICS

1. When were you born? DAY MONTH YEAR

2. Are you... Male Female

3. What is the highest level of education you have completed?

Some High School
GED
High School Diploma
Some College
Associates Degree (A.A.)
4-Year College Degree (B.A., B.S.)
Masters Degree (M.A., M.S., M.B.A., M.P.H.)
Doctoral Degree (Ph.D., M.D., D.O., etc.)

4. Which of the following best describes your race?

White or Caucasian
Black or African-American
Hispanic-American
Native American or American Indian
Asian-American
Other

5. What is your religion?

Catholic Buddhist
Protestant Muslim
Jewish None
Other

6. What is your current marital status?

Never married, not in any relationship
Never married, in a relationship
Married/living with partner
Separated/Divorced
Remarried
Widowed

7. In general, would you say that your health is:

Excellent Very Good Good Fair Poor

8. Which of the following best describes your current employment status?

Worker for pay Retired
Homemaker Unemployed
Student Disabled

9. How far away from a VA Medical Center do you live?

Less than 30 miles away
31-60 miles away
61-100 miles away
More than 100 miles away

10. How many years have you been in the National Guard? Yes No

11. Have you previously served on Active Duty? Yes No

12. If yes, how many years?

13. What is your current rank?

ENLISTED
E-1 E-2 E-3 E-4 E-5 E-6 E-7 E-8 E-9
WARRANT
W-1 W-2 W-3 W-4 W-5
OFFICER
O-1 O-2 O-3 O-4 O-5 O-6 O-7 O-8 O-9

14. Please check all of the types of health insurance you currently have:

Medicare (Part A/Part B)
Railroad Retirement Plan
VA Service Connected Disability
CHAMPUS
Indian Health Service
Medical Assistance or General Assistance
Medical Care (I/MAC)
Health Insurance/HMO through your work or union
Health Insurance/HMO through your spouse or parent's work or union
Health Insurance/HMO where you or some other family member pays the entire premium
Health Insurance/HMO where your state pays all or part of the premium
Tricare

15. What is your Military Occupational Specialty (MOS)?

PLEASE CONTINUE TO THE BACK SIDE OF THIS SHEET

12 orders. Results of the counterbalancing analyses for the Wave 2 respondents indicate that there was not a significant difference among responders and non-responders based on the order of survey they received, $\chi^2 = (11, N = 522) = 7.01, p = .798$.

2.6. Collection of Wave 2 Post-Deployment Data

2.6.1. *Survey Procedures.* We followed standard survey methodology using a modified Dillman protocol (Dillman, 1978) to collect Wave 2 post-deployment data (**Task 6**). Please see Project Timetable in the appendices. All potential subjects (those in the Baseline/Wave 1 cohort) were mailed an initial recruitment letter welcoming them home, thanking them for their service to their country, briefly describing the longitudinal study and inviting them to participate. Initial letters were mailed on 22 Aug 2007. As with all subject correspondence, we used postal service address correction to identify and update incorrect addresses. Soldiers were encouraged to contact us if they were not interested in participating in the study or did not wish to receive subsequent mailings. About one month later (19-20 Sept 2007), the first survey packet was sent. This packet consisted of a cover letter including all elements of informed consent, a 20 page survey, and \$50 incentive. At two-week intervals, non-respondents were mailed a post-card reminder, followed by a second survey (using postal mail), and third survey (using overnight Federal Express mail). A 2008 calendar with our study name and phone number was sent in January 2008. Careful tracking of mailings and addresses allowed the project coordinator to generate lists for upcoming mailings and keep to the two-week interval schedule of sending surveys.

2.6.2. *Wave 2 Response Rate.* To date, we have achieved a 76% response rate ($N = 398$) to our Wave 2 mailed survey. As illustrated in Table 1 below, after the first mailing we received 31% of surveys; after postcard notice 18%; after the 2nd mailing 9%; after the Fed-Ex mailing 13%; and after our New Year tracking we received 4%.

Table 1. *Response Rate after each Mailing Point*

Response Rates ($n = 398$)	N	%	Cumulative %
Following 1 st Survey	162	31.03%	31.03%
Following Postcard	96	18.39%	49.42%
Following 2 nd Survey	49	9.39%	58.81%
Following Fed-Ex Mailing	68	13.03%	71.84%
Following New Year Mailing	23	4.4%	76.25%
Total	398		76%

Less than 2% of the initial Baseline/Wave 1 cohort ($n = 9$) have refused to participate and have asked to be removed from our mailing list. These 9 participants indicated their refusal to participate by sending back a blank survey or calling the project coordinator to opt out of the project.

2.6.3. *Analyses of Response Bias.* To test for response bias, we compared responders and non-responders to the Wave 2 survey on a number of pre-deployment variables collected at Baseline/Wave 1 (see Table 2 below). There was no significant difference between responders and non-responders on gender, $\chi^2 (1, N = 522) = 2.87, p = .090$; ethnicity, $\chi^2 (1, N = 522) = 1.66, p = .198$; rank, $\chi^2 (2, N = 522) = 4.73, p = .094$; PTSD symptoms (PTSD Checklist, PCL total score), $t(514) = -1.52, p = .128$; depression (Beck Depression Inventory, BDI-II total score, $t(512) = -.330, p = .742$; and perceived unit social support prior to deployment, $t(518) = -1.18, p = .239$. There were minimal differences between responders and non-responders on age and marital status. It appears that responders are slightly older ($M = 29.99, SD = 8.96$) than non-responders ($M = 26.10, SD = 7.01$), $t(520) = 4.48, p < .001$ and that married participants are more likely to return surveys (50% response rate) than single participants, (31% response rate) $\chi^2 (1, N = 522) = 14.29, p < .001$.

Table 2. *Demographics of Total Sample, Respondents, and Non-respondents*

	Total Sample ($n = 522$)	Respondents ($n = 398$)	Non-respondents ($n = 124$)
Age (years)	29(8.6)	29.99(8.86)	26.10(7.01)
PTSD Symptoms (PCL)	26.20(10.01)	25.82(9.57)	27.40(11.28)
Depressive Symptoms (BDI-II)	6.03(6.81)	5.97(6.67)	6.20(7.27)
Unit Social Support	40.62(9.90)	40.34(10.03)	41.54(9.43)
Gender (% male)	89%	87%	93%
Marital Status (% married)	45%	50%	31%
Ethnicity (% Caucasian)	93%	94%	90%
Rank (% enlisted)	90%	89%	95%

Note: PCL = PTSD Checklist; BDI-II = Beck Depression Inventory-II

These findings are not surprising given our experience in tracking participants. Anecdotally, younger participants appear more mobile and likely to list their parents'

address as their home address while they live at a temporary address, such as a college dorm or apartment with roommates. In this case, mailed surveys, while sent to an address provided, may not have reached the intended participant in a timely manner. Additionally, we noted that these soldiers expressed preference for on-line survey administration and asked if such a mechanism was available instead of the paper and pencil version. Younger members of our cohort may be more technologically savvy than in years past, and improved response rates for this subgroup may be obtained using internet based survey administration. Our research group is aware of this slight disparity in participation rates, and we are seeking supplemental funds to offer this approach. However, these differences are minor overall and suggest minimal response bias.

2.7. Sample Size Considerations

2.7.1. *Evaluation of Sample Size.* Our goal was to achieve 80% follow-up of all subjects in the existing Baseline/Wave 1 cohort. Since our current response rate falls slightly below this goal (76%), we consulted with our Lead Statistician (Dr. Erickson) regarding statistical modeling concerns based on this initial N (**Task 6**). Sample size considerations for the structural equation modeling to be used in the final analyses are multifaceted, and include considerations of the power to detect differences between the fit of two competing models (typically requiring about 200-400 cases for a moderate number of degrees of freedom; McQuitty, 2004) and the sample size required for stable parameter estimates (with only vague guidelines available; Bentler & Choi, 1987; Loehlin, 1992). While the current sample size is probably a large enough sample to meet the requirements for model stability and to compare competing models, our current sample is in the smaller range because we are limited by the size of our pre-deployment cohort.

2.7.2. *Recruitment of Additional Subjects.* To address future concerns about sample size, we have taken advantage of opportunities when possible to collect additional pre-deployment data (using the same measures as those collected for the current study cohort). In June of 2007, using supplemental funds from the Minneapolis VA Medical Center and Minnesota Medical Foundation, we travelled to Ft. Sill, Oklahoma and collected pre-deployment Baseline/Wave 1 data (the same measures as those collected for the present study) from a second cohort of 238 soldiers deploying to Iraq with the 2nd Battalion, 147th Assault Helicopter Battalion (2/147 AHB). The 2/147 AHB are still deployed in Iraq and scheduled to return home in June of 2008. This cohort has consented to be followed up longitudinally, and we have recently received supplemental funds to collect Wave 2 post-deployment data from this cohort from the VA Health Services Research & Development Center of Excellence at the Minneapolis VA Medical Center. We will continue to seek supplemental funding to follow up this additional cohort at Waves 3 and 4, and then would recommend incorporating this subgroup into the current longitudinal project. Given our current response rate, we anticipate this approach could increase our final N by about 180 for a sample size of over 550 participants. We are considering budget issues and a plan to submit a request to change the original Statement of Work to the Army Contracting Officer Representative to add this subset of participants. If approved, final analyses will

examine and report differences between the 1/34 BCT and 2/147 cohort on relevant pre-deployment variables (e.g., gender, age, rank, trauma history, military occupational specialty) and outcomes.

2.8. Scanning Time 2 Data

We are currently in the process of scanning and verifying Wave 2 data with the Teleform program software (**Task 6**). Our scanning procedure requires that each variable be verified by the person scanning as to eliminate software error. This process ensures that missing data is truly missing and not an artifact of errant marks made by the participant or lack of specificity on the part of the computer program. Any questions are carefully recorded on a scanning log and corrected by the project coordinator. Using this procedure, we are confident that the quality of the data is impeccable. We have completed scanning and verification of over 50% of our Wave 2 data, and we are on schedule with this task and anticipate completing this data verification by the end of April.

3. KEY RESEARCH ACCOMPLISHMENTS

In summary, we accomplished the following key research task in Year 1:

- Completely cleaned and checked pre-deployment Baseline/Wave 1 dataset
- Successfully tracked 99% of Baseline/Wave 1 cohort at Wave 2
- Maintained and updated subject tracking tool
- Completed Wave 2 data collection from 76% of the Baseline/Wave 1 cohort with minimal response bias
- Disseminated preliminary Baseline/Wave 1 findings and described longitudinal cohort study at key national conferences and submitted manuscripts for publication
- Submitted proposals for supplemental funding to support and extend the current project
- Completed scanning and data verification of over half of the Wave 2 data with completion of this task anticipated end of April 2008

4. REPORTABLE OUTCOMES

The following is a comprehensive list of manuscripts, abstracts, and presentations that have resulted from the current project or our closely related work in launching this research. While data collection is still ongoing with the current longitudinal project, we believe that our work in Year 1 is laying a solid foundation from which to disseminate findings from the subsequent waves of data collection. It is expected that at the completion of data scanning and entry of Time 2 data, several manuscripts will be prepared and submitted for publication in leading peer reviewed journals.

4.1. Publications

- Polusny, M. A., Erbes, C., Arbisi, A., Thuras, P., Kehle, S., Rath, M., Courage, C., Reddy, M. K., & Duffy, C. (2008). Impact of prior OEF/OIF combat experience on PTSD, depressive, and somatic symptoms among National Guard soldiers preparing for deployment to Iraq. Manuscript submitted to *Military Medicine*.
- Erbes, C. R., Polusny, M. A., MacDermid, S., & Compton, J. (in press). Couple therapy with combat deployment issues and PTSD. *Journal of Clinical Psychology In Session*.
- Polusny, M. A., & Erbes, C. (2007). Returning home from war: Risk, resilience, and mental health problems among OIF/OEF combat veterans. *Minnesota Psychologist*, 56, 4-8.
- Erbes, C., Polusny, M. A., Dieperink, M., Kattar, K., Leskela, J., & Curry, K. (2007). Providing mental health care for military service members returning from Iraq and Afghanistan. *Minnesota Psychologist*, 56, 5-8.
- Carter-Visscher, R., Polusny, M. A., Erbes, C. R., Thuras, P., Murdoch, M., Kehle, S., & Campbell, R. (2008). Gender differences in pre-deployment stressors and mental health among National Guard troops deployed to Operation Iraqi Freedom (OIF). Manuscript in preparation.
- Ferrier-Auerbach, A. G., Kehle, S. Erbes, C. R., Arbisi, P. A., Polusny, M. A., & Thuras, P. (2008). Pre-deployment predictors of alcohol use in National Guard soldiers. Manuscript in preparation.

4.2. Abstracts/Conference Presentations

- Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., Reddy, M. K., Erickson, D., Murdoch, M., Rath, M., & Courage, C. (August, 2008). The Readiness and Resilience in National Guard Soldiers Cohort study. Paper accepted for presentation at the annual meeting of the American Psychological Association, Boston, MA.

- Erbes, C. R., Polusny, M. A., Arbisi, P. A., Thuras, P., Reddy, M. K., Rath, M., & Courage, C. (August, 2008). Prospective risk/resilience factors predicting in-theater and post-deployment PTSD symptoms. Paper accepted for presentation at the annual meeting of the American Psychological Association, Boston, MA.
- Arbisi, P. A., Thuras, P., Reddy, M. K., Erbes, C. R., & Polusny, M. A. (August, 2008). Neuroticism and introversion moderate distress in deployed National Guard soldiers. Paper accepted for presentation at the annual meeting of the American Psychological Association, Boston, MA.
- Ferrier-Auerbach, A. G., Kehle, S., Erbes, C. R., Arbisi, P. A., Thuras, P., & Polusny, M. A. (August, 2008). Alcohol use in National Guard soldiers pre- and post-deployment. Paper accepted for presentation at the annual meeting of the American Psychological Association, Boston, MA.
- Arbisi, P. A., Polusny, M. A., Erbes, C. R., & Thuras, P., Kehle, S. (August, 2007). Predictors of self reported alcohol use in National Guard troops prior to Iraqi deployment. Paper presented at the annual meeting of the American Psychological Association, San Francisco, CA.
- Arbisi, P. A., Polusny, M. A., Erbes, C. R., & Thuras, P. (May, 2007). The impact of preparation for deployment to Iraq on the MMPI-2 RC scales in National Guard soldiers. Paper presented at the 42nd Annual Symposium on Recent Developments with the MMPI-2/MMPI-A, Minneapolis, MN.
- Polusny, M. A., Erbes, C. R., Murdoch, M., Arbisi, P. A., Seifert, A., & Kehle, S. (February, 2007). Gender differences in pre-deployment stressors and mental health among National Guard troops deployed to Operation Iraqi Freedom (OIF). Paper presented at the Health Services Research and Development National Meeting, Washington, DC.
- Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., Murdoch, M., Kehle, S., Seifert, A., Duffy, C., Rath, M. B., & Courage, C. (February, 2007). Impact of previous combat exposure on psychiatric symptoms among male and female National Guard troops prior to deploying to Iraq. Paper presented at the Health Services Research and Development National Meeting, Washington, DC.

4.3. Invited Presentations

- Polusny, M. A. (2007, December). Combat trauma: Resiliency, risk and post-deployment mental health. Invited Keynote Address presented at the annual meeting of the National Association of Social Workers, Minneapolis, MN.
- Polusny, M. A. (2007, November). Combat deployment and Reservists' mental health: The U.S. perspective. Invited presentation and discussant guest at the "Post-Deployment Mental Health Adjustment: An International

Perspective “ Senior International Forum and Pre-Meeting Institute held at the International Society for Traumatic Stress Studies, Baltimore, MD.

Polusny, M. A. (2007, November). Readiness and Resilience in National Guard Soldiers (RINGS): Update and preliminary findings. Center for Chronic Disease Outcome Research (CCDOR) Research Seminar, Minneapolis Veterans Affairs Medical Center, Minneapolis, MN.

Polusny, M. A. (2007, June). Impact of previous combat deployment on psychiatric symptoms among National Guard troops prior to deploying to Iraq. Invited keynote presentation at the 20th Annual VA Research Day, Minneapolis Veterans Affairs Medical Center, Minneapolis, MN.

Polusny, M. A. & Erbes, C. R. (2007, February). Readiness and Resilience in National Guard Soldiers: Update on a VA and MN NG research collaboration. Invited presentation at the 6th Annual Minnesota Army and Air National Guard Medical Readiness Conference, Rosemount, MN.

4.4. Informatics

Data tracking tool was established.

4.5. Funding Activities

4.5.1. Funding Received. The following is a list of funded grant proposals awarded to members of our research team. We have included all projects that are based on the general work supported by this award.

2008-2012 Sponheim, S. (P.I.), Polusny, M. A. (Co-I), Lim, K. O., McGuire, K., & Collins, R. The effects of blast as compared to post-traumatic stress disorder on brain function and structure. Department of Defense Intramural TBI Investigator Initiated Research Award, \$1,481,518.

2007-2008 Polusny, M.A. (PI), Arbisi, P.A. (Co-I), Erbes, C.R. (Co-), Readiness and Resilience in National Guard Soldiers (RINGS) interview project, Department of Veterans Affairs Medical Center, \$84,000.

2007-2008 Arbisi, P. A. (PI), Polusny, M.A., (Co-I), Erbes, C. R. (Co-I), Validation of the MMPI-2 Restructured Form (MMPI-2 RF) in National Guard Soldiers recently returned from service in Operation Iraqi Freedom (OIF), University of Minnesota Press, \$27,209.

2007-2008 Arbisi, P.A., (PI), Sponheim, S., Polusny, M.A., (Co-I), Erbes, C. R. (Co-I), & Thuras, P. (Co-I), Genetic and biochemical factors associated with risk and resilience in returning Iraq veterans, Minnesota Veterans Research Institute, Investigator Grants Program, \$20,000.

2008 Polusny, M. A., (PI), Erbes, C. R. (Co-I), Murdoch, M. (Co-I), Arbisi, P.A., (Co-I), Thuras, P. D., (Co-I), & Reddy, M. (Co-I), Gender, war, and sexual harassment: A longitudinal follow-up of OIF veterans. Center for Chronic Disease Outcome Research, Locally Initiated Project, \$18,980.

2007-2008 Erbes, C.R. (PI), Polusny, M.A. (Co-PI), MacDermid, S. Investigating the Relationship Between Partner Interactions and Post-Deployment Distress, Lilly Endowment, Inc, \$108,963.

4.5.2. Other Grants Submitted. Dr. Polusny was a Partnering Investigator on a DoD PTSD Multidisciplinary Research Consortium Award application that has been recommended for alternate funding.

2007 Polusny, M. A. (Partnering P.I.) with Krystal, J. (Initiating P.I.), et al. Consortium for the Translational Neuroscience and Treatment of Stress and PTSD, W81XWH-07-PTSD-MRC. Department of Defense PTSD Multidisciplinary Research Consortium Award, \$1,299,688. Recommended for Alternate Funding.

5. CONCLUSION

This report describes progress in the first year of a 4-wave longitudinal cohort study of pre-deployment risk and resilience factors predictive of post-deployment levels of mental health disruptions, mental health service utilization, and military retention and attrition over time. In this initial year, we have accomplished the important work of starting up and launching the longitudinal study, developing survey method and subject tracking procedures that are critical to the future success of the project, and disseminating preliminary Baseline/Wave findings that will lay the foundation for subsequent longitudinal analyses.

For the period of 15 March 2007 to 14 March 2008, we have met all tasks outlined in the approved Statement of Work. The project is progressing on schedule, and no notable problems have been identified. All project start up tasks were completed in a timely manner, and we have established and met our data collection timetable for Year 1 of the project. Using standard mail survey methodology, Wave 2 self-report measures were successfully collected from 76% of the Baseline/Wave 1 cohort. We have conducted data analyses to examine response rates across numerous Baseline/Wave 1 variables and have found that response bias was minimal. Thus, it is likely that Wave 2 data is likely representative of the entire cohort. The response rate obtained for Wave 2 (76%) was slightly below our goal of 80%, however, we have consulted with our Lead Statistician and are confident that our sample size will be adequate to conduct our proposed analyses. Additionally, we have successfully recruited over 200 additional subjects from the 2/147 AHB who completed pre-deployment measures and are eligible to enter this longitudinal study following their return from Iraq should we secure funds to support this and obtain approval to do so. Data scanning and verification of Wave 2 data is well underway, and preliminary

findings from this follow up study will be available in Year 2. In this report, we discussed our implementation of methods for the tracking and retention of subjects in this longitudinal project. The importance of community partnerships and VA-military collaborations, building cohort affiliation through project identify, systematic subject tracking, and using established survey methodology are discussed. Our research team is fully prepared and ready to accomplish the tasks outlined for Year 2 of this project.

6. REFERENCES

- Alimena, B. S. (1962). A method of determining unbiased distribution in the latin square. *Psychometrika*, 27, 315-317.
- Bentler, P.M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods and Research*, 16, 78-117.
- Cotter, R. B., Burke, J. D., Loeber, R., & Mutchka, J. (2005). Predictors of contact difficulty and refusal in a longitudinal study. *Criminal Behaviour and Mental Health*, 15, 126-137.
- Dillman, D. (1978). *Mail and telephone surveys: The total design method*. New York: Wiley.
- Leonard, N. R., Lester, P., Rotheram-Borus, M. J., Mattes, K., Gwadz, M., & Ferns, B. (2003). Successful recruitment and retention of participants in longitudinal behavioral research. *AIDS Education and Prevention*, 15, 269-281.
- Loehlin, J. C. (1992). *Latent variable models: An introduction to factor, path, and structural analysis*. (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- McQuitty, S. (2004). Statistical power and structural equation models in business research. *Journal of Buisness Research*, 57(2), 175-183.
- Ribisl, K. M., Walton, M. A., Mowbray, C. T., Luke, D. A., Davidson, W. S., & Bootsmiller, B. J. (1996). Minimizing participant attrition in panel studies through the use of effective retention and tracking strategies: Review and recommendations. *Evaluation and Program Planning*, 19, 1-25.

APPENDICES

- A. Project Timetable
- B. Curriculum Vita for Madhavi Reddy, M.A.
- C. Curriculum Vita for Courtney Duffy, B.A.

Activities/Events	Pre-Award Period					Quarters																
						2006/07		2007/2008				2008/2009				2009/2010				2010/2011		
	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Jan – Mar 06	Apr – Jun 06	Jul – Sep 06	Oct – Dec 06	Jan – Mar 07	Apr – Jun 07	Jul – Sep 07	Oct – Dec 07	Jan – Mar 08	Apr – Jun 08	Jul – Sep 08	Oct – Dec 08	Jan – Mar 09	Apr – Jun 09	Jul – Sep 09	Oct – Dec 09	Jan – Mar 10	Apr – Jun 10	Jul – Sep 10	Oct – Dec 10	Jan – Mar 11	Apr – Jun 11
PREINVESTIGATION TASKS																						
Pre-deployment Time 1 data collected from MN NG troops at Camp Shelby (2/28-3/6/06)	X																					
NG 1/34 Brigade Combat Team deployed to Iraq late 3/06		X																				
Prepare local IRB and DOD regulatory documents				X																		
Recruit staff and set up research space					X																	
INVESTIGATION TASKS																						
Hire and train staff						X																
Purchase supplies and equipment						X																
Set up subject tracking database			X	X																		
Finalize protocol; Obtain local and DOD IRB approvals					X	X																
NG 1 st Brigade Combat Team returns and Pre-deployment data collected at Ft Sill 7/07							X															
Prepare Time 2 survey materials							X															
Send Time 2 surveys, follow ups								X														
Monitor response rates, track subjects								X														
Recruit additional subjects if needed								X	X													
Scan and check Time 2 data								X	X													
Conduct preliminary Time 2 analysis and report to NG										X												
Prepare Time 3 survey materials										X	X											
Send Time 3 survey											X	X										
Monitor response rates, track subjects											X	X										
Scan and check Time 3 data											X	X	X									
Conduct preliminary Time 3 analysis and reports to NG													X	X								
Prepare Time 4 survey materials														X								
Send Time 4 surveys															X	X						
Monitor response rates, track subjects															X	X						
Scan and check Time 4 data															X	X						
Merge and clean data																	X					
Conduct final data analysis																	X	X				
Prepare final report																	X	X				
Begin dissemination activities																		X	X			

Curriculum Vitae for Research Project Personnel Hired in Year One Follows

CURRICULUM VITAE

Madhavi K. Reddy

Address: 500 East Grant St., Unit #1906
Minneapolis, MN 55404
Email: madhavi.reddy@va.gov

Home Phone: 815.762.1104
Office Phone: 612.467.5509

EDUCATION

Doctorate of Philosophy Candidate, Clinical Psychology
Northern Illinois University, DeKalb, Illinois
American Psychological Association Approved Program
Anticipated completion in August 2010

Present

Master of Arts, Clinical Psychology
Northern Illinois University, DeKalb, Illinois
American Psychological Association Approved Program

December 2005

Bachelor of Arts, Biology
Hendrix College, Conway, AR

May 2001

FELLOWSHIPS, HONORS, AND AWARDS

National Institute of Mental Health Pre-doctoral Traineeship
Center for the Study of Family Violence and Sexual Assault

7/2002 – 7/2006

Inducted into Sigma Xi: The Scientific Research Society

4/2005

Academic Honors

2000-01

Summer Student Research Fellow, National Institutes of Health
National Cancer Institute

6/1999-9/1999

University Scholarship

1996-97

RESEARCH EXPERIENCE

Master's Thesis
Northern Illinois University
DeKalb, Illinois

7/2002-7/2005
Chairperson
Holly Orcutt, PhD

Thesis title: Effects of written disclosure on experiential avoidance, emotional expressiveness, and psychological well-being in college students.

Principal Investigator
Northern Illinois University
DeKalb, Illinois

12/2004-present
Faculty Advisor
Holly Orcutt, PhD

Project title: Complicated grief in a young adult sample

Principal Investigator
Northern Illinois University
DeKalb, Illinois

12/2004-5/2006
Faculty Advisor
Holly Orcutt, PhD

Project title: Defining psychological abuse

Co-Principal Investigator
Northern Illinois University
DeKalb, Illinois

12/2004-present
Faculty Advisor
Thomas McCanne, PhD

Project title: Cognitive coping styles and their relationship with abuse narratives of college women

Co-Principal Investigator
Northern Illinois University
DeKalb, Illinois

1/2006-present
Faculty Advisor
Joel Milner, PhD

Project title: Interpersonal Functioning in Men

Co-Principal Investigator
Northern Illinois University
DeKalb, Illinois

1/2006-present
Faculty Advisor
Lisa Finkelstein, PhD

Project title: Validation of the Racial and Ethnic Identity Scale (REIDS)

Research Team Member
Northern Illinois University
DeKalb, Illinois

8/2002-8/2006
Supervisor
Alan Rosenbaum, PhD

Research Team Member
Northern Illinois University
DeKalb, Illinois

8/2002 - present
Supervisor
Holly Orcutt, PhD

Research Assistant
University of Michigan
Ann Arbor, Michigan

8/2001-8/2002
Supervisor
S. Graham-Bermann, PhD

Student Researcher
National Institutes of Health, National Cancer Institute
Bethesda, Maryland

6/1999-9/1999
Supervisor
Ofelia Olivero, PhD
Staff Scientist

PUBLICATIONS AND PRESENTATIONS

Publications

Reddy, M. K., Pickett, S. M., & Orcutt, H. K. (2006). Experiential avoidance as a mediator of the relationship between psychological abuse and current mental health symptoms in college students. *Journal of Emotional Abuse*, 6, 67-85.

Reddy, M. K., Fleming, M. T., Howells, N. L., Rabenhorst, M. M., Casselman, R., & Rosenbaum, A. (2006). The effects of method on participants and disclosure rates in research on sensitive topics. *Violence and Victims*, 21, 499-506.

Rosenbaum, A., Rabenhorst, M. M., **Reddy, M. K.**, Fleming, M. T., & Howells, N. L. (2006). A comparison of methods for collecting self-report data on sensitive topics. *Violence and Victims*, 21, 461-471.

Olivero, O. A., **Reddy, M. K.**, Pietras, S. M., Poirier, M. C. (2001). Plasma drug levels compared with DNA incorporation of 3'-azido-3'-deoxythymidine (AZT) in adult cynomolgus (*Macaca fascicularis*) monkeys. *Experimental Biology and Medicine*, 226(5), 446-449.

Manuscripts Under Review

Rosenbaum, A., **Reddy, M. K.**, Rabenhorst, M. M., Howells, N. L., & Fleming, M. T. *Dating violence and relationship acceleration*. Manuscript under review.

Manuscripts in Preparation

Reddy, M. K., Erbes, C. R., Polusny, M. A., & Arbisi, P. A. (2007). *MMPI-2 PSY-5 scales as predictors of resilience in sexually assaulted women*. Manuscript in preparation.

Reddy, M. K., & Murdoch, M. *Gender differences within the factor structure of the SEQ*. Manuscript in preparation.

Reddy, M. K., & Orcutt, H. K. *Prospective impact of experiential avoidance on psychological abuse and mental health*. Manuscript in preparation.

Reddy, M. K., & Orcutt, H. K. *Effects of written disclosure on experiential avoidance, emotional expressiveness, and psychological well-being in college students*. Manuscript in preparation.

Reddy, M. K. *Complicated grief in a young adult sample*. Manuscript in preparation.

Poster Presentations

Reddy, M. K., & Orcutt, H. K. (2006, November). *Experiential avoidance as a mediator between childhood psychological abuse and distress in a prospective sample of female undergraduate students*. Poster session presented at the annual meeting of the

Association for Behavioral and Cognitive Therapies, Chicago, IL.

- Reddy, M. K., & Orcutt, H. K.** (2006, November). *Complicated grief predicts symptoms of depression beyond grief reactions and PTSD symptomatology*. Poster session presented at the annual meeting of the International Society of Traumatic Stress Studies, Hollywood, CA.
- Richmond, A., **Reddy, M. K.**, Fleming, M. T., & Finkelstein, L. (2006, November). *Development of the Racial and Ethnic Identity Scale (REIDS)*. Poster session presented at the annual meeting of the Association of Behavioral and Cognitive Therapies, Chicago, IL.
- Fleming, M. T., **Reddy, M. K.**, Howells, N. L., Rabenhorst, M. M., Casselman, R., & Rosenbaum, A. (2005, November). *Using telephone technology for the collection of sensitive data*. Poster session presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington D.C.
- Howells, N. L., **Reddy, M. K.**, Fleming, M. T., Casselman, R., & Rosenbaum, A. (2005, November). *Gender effects on collection methods for sensitive data*. Poster session presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, D.C.
- Reddy, M. K.**, Pickett, S. M., Schram, J., & Orcutt, H. K. (2004, November). *Psychological abuse and experiential avoidance as prospective predictors of negative mental health outcomes*. Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, New Orleans, LA.
- Orcutt, H. K., **Reddy, M. K.**, & Kostiwa, I. (2004, November). *The prospective impact of forgiveness on physical and mental health*. Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, New Orleans, LA.
- Rosenbaum, A., Rabenhorst, M. M., **Reddy, M. K.**, Howells, N. L., & Fleming, M. T. (2004, August). *Relationship acceleration and dating aggression*. Poster session presented at the annual meeting of the American Psychological Association, Honolulu, HI.
- Reddy, M. K.**, Pickett, S. M., & Orcutt, H. K. (2003, November). *Psychological abuse and experiential avoidance as predictors of depression, anxiety, and stress*. Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Boston, MA.
- Rosenbaum, A., Rabenhorst, M. M., **Reddy, M. K.**, Fleming, M. T., & Howells, N. L. (2003, November). *A comparison of methods for collecting sensitive data*. Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Boston, MA.

Reddy, M. K. (2000, April). *Plasma drug levels compared with DNA incorporation of 3'-azido-3'-deoxythymidine (AZT) in adult cynomolgus (Macaca fascicularis) monkeys*. Poster session presented at the annual meeting of the National Conference on Undergraduate Research, Missoula, MT.

Paper Presentations

Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., **Reddy, M. K.**, Erickson, D., Murdoch, M., Rath, M., & Courage, C. (August, 2008). *The readiness and resilience in National Guard Soldiers cohort study*. Paper accepted to the annual meeting of the American Psychological Association, Boston, MA.

Erbes, C. R., Polusny, M. A., Arbisi, P. A., Thuras, P., **Reddy, M. K.**, Rath, M., & Courage, C. (August, 2008). *Prospective risk/resilience factors predicting in-theater and post-deployment PTSD symptoms*. Paper accepted to the annual meeting of the American Psychological Association, Boston, MA.

Arbisi, P. A., Thuras, P., **Reddy, M. K.**, Erbes, C. R., & Polusny, M. A. (August, 2008). *Neuroticism and introversion moderate distress in deployed National Guard Soldiers*. Paper accepted to the annual meeting of the American Psychological Association, Boston, MA.

Arbisi, P. A., Polusny, M. A., Erbes, C., Thuras, P., & **Reddy, M. K.** (May, 2008). The MMPI-2 Restructured Form (RF) in National Guard Soldiers recently returned from service in Iraq: Preliminary findings. Paper accepted for presentation at the annual Symposium on Recent Developments with the MMPI-2/MMPI-A, Minneapolis, MN.

Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., **Reddy, M. K.**, Duffy, C., Rath, M., & Courage, C. (February, 2008). *Prospective predictors of in-theater post-traumatic stress symptoms in a cohort of National Guard soldiers deployed to OIF*. Paper presented at VA Health Services Research & Development National Meeting, Baltimore, MD.

Erbes, C. R., Polusny, M. A., Rath, M., Courage, C., Duffy, C., **Reddy, M. K.**, & Thuras, P. (February, 2008). *Psychiatric distress in a cohort of deployed National Guard soldiers*. Paper presented at the VA Health Services Research & Development National Meeting, Baltimore, MD.

Reddy, M. K., & Orcutt, H. K. (2005, November). Effects of written disclosure on experiential avoidance, emotional expressiveness, and psychological well-being in college students. In H. K. Orcutt (Chair), *Understanding experiential avoidance: Experimental and measurement perspectives*. Symposium presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, D.C.

Reddy, M. K., Pickett, S. M., & Orcutt, H. K. (2005, July). *Experiential avoidance as a mediator in the relationship between childhood psychological abuse and current mental health symptoms*. Paper presented at the annual meeting of the International Family Violence Research Conference, Portsmouth, NH.

- Rosenbaum, A., Rabenhorst, M. M., **Reddy, M. K.**, Fleming, M. T., & Howells, N. L. (2003, July). *A comparison of methods for collecting sensitive data*. Paper presented at the annual meeting of the International Family Violence Research conference, Portsmouth, NH.
- Wiener, R., **Reddy, M. K.**, & Graham-Bermann, S. (2002, August). Assessing Head Start children's family context and violence exposure. In S. Graham-Bermann (Chair), *Validating Head Start children's self-report of violence exposure*. Symposium conducted at the annual meeting of the American Psychological Association, Chicago, IL.

CLINICAL EXPERIENCE

Psychology Extern
Ben Gordon Center
DeKalb, Illinois

7/2006-7/2007
Supervisors
Greg Tierney, PhD

Responsibilities

- Conduct comprehensive mental health assessments
- Provide case management for clients
- Develop, implement, and review individualized treatment plans
- Conduct individual and group therapy for a variety of clients from the community
- Participate in weekly individual supervision
- Facilitate an anger management group for court-referred and non-referred clients

Hours: 20 hours per week

Psychology Extern
Genoa-Kingston School District
Genoa, Illinois

8/2005-6/2006
Supervisors
Karen White, PhD

Responsibilities

- Conducted psychoeducational assessments for a variety of students from K-12
- Assessed possible learning disabilities and/or emotional difficulties
- Wrote integrated assessment reports
- Attended Individual Education Plan (IEP) meetings where input was provided as to whether to qualify students for special education services
- Conducted observations and consulted with teachers and support staff on behavior management issues
- Provided individual therapy and crisis intervention as needed
- Provided in-services for teachers and support staff
- Conducted curriculum based norming (CBM) services in reading, writing, and math for 2nd and 3rd grades in an effort to norm the school district and provide information on how their students are performing and performing in comparison to the national average

Hours: Approximately 10 hours per week

Psychological Assistant
Common Boundary Wellness Center
Rockford, Illinois

8/2005-8/2007
Supervisor
Cindy A. Stear, PsyD

Responsibilities

- Administer and score intellectual, personality, and behavioral measures for children, adolescents, and adults
- Write integrated reports
- Conduct intake interviews and individual therapy
- Referral sources include mental health professionals
- Participate in weekly individual supervision

Hours: Approximately 10 hours per week

Psychological Assistant
Behavioral Health Clinic
DeKalb, Illinois

8/2005-8/2006
Supervisor
Laura Avila, Ph.D.

Responsibilities

- Administer and score intellectual, achievement, personality, and behavioral health measures for children, adolescents, and adults
- Write integrated reports
- Conduct intake interviews and individual therapy
- Referral sources include mental health professionals
- Participate in weekly individual supervision

Hours: As needed; approximately 5 hours per week

Third Year Practicum Student
Psychological Services Center
Northern Illinois University
DeKalb, Illinois

8/2004-5/2005
Supervisors
Karen White, PhD
Chris Lovejoy, PhD
David Valentiner, PhD

Responsibilities

- Conducted intake interviews, structured clinical interviews (SCID), individual therapy, and parent training
- Presented cases informally to an assigned clinical team and formally at a case conference
- Provided crisis intervention as needed
- Consulted with other professionals on the clinical team, clinic, and in the community
- Assisted in case formulation and selected appropriate modalities
- Administered, scored, and wrote reports for intellectual and personality assessments
- Provided written documentation and semester reports detailing progress of clients
- Interventions included manualized treatments, cognitive-behavioral, interpersonal, and supportive strategies
- Primary populations included university students and community members with an emphasis in anxiety disorders

Second Year Practicum Student
Psychological Services Center
Northern Illinois University
DeKalb, Illinois

8/2003-8/2004
Supervisors
Karen White, PhD
Bob Meyer, PhD
Alan Rosenbaum, PhD

Responsibilities

- Conducted individual therapy and intake interviews
- Presented cases informally to the clinical team
- Consulted with other professionals on an assigned clinical team, clinic, and in the community
- Assisted in case formulation and selected appropriate modalities
- Utilized interviews and/or test data to develop treatment plans for therapy clients, implemented treatment plans, and when necessary, modified treatment plans
- Administered, scored, and wrote reports for intellectual and personality assessments
- Provided written documentation and semester reports detailing the progress of clients
- Interventions included cognitive-behavioral and interpersonal strategies
- Primary populations included university students and community members

First Year Practicum Student
Psychological Services Center
Northern Illinois University
DeKalb, Illinois

8/2002-8/2003
Supervisors
Karen White, PhD
Thomas McCanne, PhD

Responsibilities

- Developed clinical values consistent with the scientific-practitioner model
- Developed interviewing, conceptualizing, communication, and self-evaluation skills
- Administered, scored, and wrote reports for intellectual assessments

TEACHING EXPERIENCE

Adjunct Faculty
Psychology of Adjustment
Kishwaukee College
Malta, IL

Spring 2007

Adjunct Faculty
Abnormal Psychology
Kishwaukee College
Malta, IL

Fall 2006

Guest Lecturer
Honors Psychology 101
Northern Illinois University
DeKalb, Illinois

10/2004

CERTIFICATION AND SPECIALIZED TRAINING

Court Appointed Special Advocate 3/2005-5/2007
DeKalb County Court Appointed Special Advocate Association
Sycamore, Illinois

Severity of Childhood Psychiatric Illness Scale Administration Certification 7/2006
Ben Gordon Center
DeKalb, Illinois

Domestic Violence and Sexual Assault Response Training 2/2004
Safe Passage Domestic Violence and Sexual Assault Prevention Agency
DeKalb, Illinois

Nursing Child Assessment Teaching Scale Administration Certification 2/2003
Northern Illinois University
DeKalb, Illinois

**Home Observation for Measurement of the Environment Inventory
Administration Certification** 2/2003
Northern Illinois University
DeKalb, Illinois

RELEVANT EMPLOYMENT

Project Coordinator
Readiness and Resilience in National Guard Soldiers (RINGS) Study 7/2007- present
*Longitudinal Risk and Resilience Factors Predicting Psychiatric Disruption,
Mental Health Utilization, & Military Retention in OIF National Guard Troops,
Department of Defense (W81XWH-07-2-0033)*
University of Minnesota Medical School
Minneapolis Veterans Affairs Medical Center
Minneapolis, Minnesota

Responsibilities:

- Responsible for the day-to-day aspects for running a DoD funded grant
- Scheduling data collection in a multi-wave survey project, contacting participants, coordinating data collection, data management and analysis, and assisting in training and supervision of research assistants.
- Participate in data analysis, preparing manuscripts, conference presentations, and future grant applications

On-Call Worker
Ben Gordon Center
DeKalb, Illinois

8/2005-6/2006

Responsibilities:

- Be available to speak with callers and provide crisis management during times the community mental health center is closed
- Provide psychological screenings at Kishwaukee Hospital for adults who may need to be hospitalized at the state mental hospital
- Provide psychological screening for uninsured children to determine whether hospitalization is appropriate and coordinate placement

Healthy Family Illinois Program Evaluator
The Center for the Study of Family Violence
and Sexual Assault
DeKalb, Illinois

2/2003-5/2006

Responsibilities:

- Traveled to homes of families participating in the Healthy Family Program evaluation
- Administered and scored the NCAP, HOME inventory, and Child Abuse Potential Inventory
- Interviewed the primary caretaker and observed parent-child interactions

VOLUNTEER ACTIVITIES

Court Appointed Special Advocate
DeKalb County

3/2005-5/2007

Responsibilities:

- Assigned to an abuse or neglect case by the judge
- Conduct thorough research on the background of the case
- Interview everyone involved in the case including the child
- Review documents pertinent to the case
- Write up and make reports to the court recommending the best interests of the child

UNIVERSITY INVOLVEMENT

Member

Department of Psychology Diversity Training Committee
Department of Psychology Graduate Student Advisory Committee

10/2005-7/2007
8/2004-8/2005

PROFESSIONAL AFFILIATIONS

Association of Behavioral and Cognitive Therapies (ABCT)	2003-present
American Psychological Association Graduate Student Affiliate (APA)	2002-present
International Society for Traumatic Stress Studies (ISTSS)	2003-present
American Psychological Society (APS)	2003-present

References Available Upon Request

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EDUCATION

Bachelor of Arts: Psychology, Certificate in Global Cultures
University of Wisconsin-Madison, Graduated May 2006 with Distinction
Overall GPA: 3.846

HONORS AND AWARDS

Psi Chi National Psychology Honor Society, Inducted September 2005
National Society of Collegiate Scholars, Inducted September 2003
University of Wisconsin-Madison Dean's List, Fall 2002-Spring 2004 and Fall 2005-Spring 2006

RESEARCH EXPERIENCE

September 2006-
present

Research Project Assistant, Readiness and Resilience in National Guard Soldiers (RINGS) Laboratory
Veterans Affairs Medical Center, Minneapolis, MN
Projects: Department of Defense funded RINGS Study, grant # W81XWH-07-2-0033; Minnesota Medical Foundation funded National Guard Service Personnel Pre-Deployment Study
Duties and Responsibilities: Assist in conducting four-wave longitudinal study of resilience and reintegration of OIF/OEF National Guard troops; responsible for survey development and design in Cardiff TeleForm; coordinate mailed survey preparation and administration; manage data in Microsoft Excel and SPSS; assisted in pre-deployment data collection; responsible for coordinating in-theater survey of soldiers deployed to Iraq; coordinate clinical interview data collection with combat deployed soldiers; record minutes for weekly lab meetings
Supervisors: Melissa Polusny, Ph.D., L.P. & Christopher Erbes, Ph.D., L.P.

September 2006-
present

Research Assistant, Institute of Child Development
University of Minnesota, Minneapolis, MN
Duties and Responsibilities: Aided in administration of assessments for homeless children and parents; conducted face-to-face interviews with homeless men to assess causes and circumstances of homelessness; responsible for data management; attend weekly lab meetings
Supervisor: Ann Masten, Ph.D.

February 2007-
August 2007

Community Program Assistant, Post Traumatic Stress Recovery (PTSR) Clinic
Veterans Affairs Medical Center, Minneapolis, MN
Projects: Minnesota Medical Foundation funded Quality of Life Veterans Study; PTSR Program Evaluation
Duties and Responsibilities: Administered intakes and follow-up assessments to veterans with PTSD to determine factors affecting quality of life and satisfaction with PTSR program; tracked appointments using Microsoft Excel and contacted patients for follow-up assessments;

responsible for data management; prepared manuscripts and consent forms for local IRB

Supervisor: Christopher Erbes, Ph.D., L.P.

September 2005-
June 2006

Research Assistant, Child Emotion Research Laboratory
University of Wisconsin, Madison, WI

Duties and Responsibilities: Tested social and cognitive function in maltreated children who were raised in orphanages overseas; consented parents; administered computer-based reward-recognition task to participants; attended weekly lab meetings where we discussed the progression of the various labs and evaluated other research in the field

Supervisor: Seth Pollak, Ph.D.

RELEVANT PROFESSIONAL EXPERIENCE

Summers 2000-
2006

Inclusion Facilitator

City of Bloomington Parks and Recreation, Bloomington, MN

Duties and Responsibilities: Worked full-time in day camp and summer school settings one on one with children who have various physical and psychological limitations; worked with wide range of disabilities from autism and cerebral palsy to oppositional defiant disorder and bipolar disorder; developed leadership experience as a senior staff member; tackled problems involving childhood abuse and neglect

Supervisor: Greg Boatman, Assistant Parks and Recreation Manager

September 2005-
June 2006

At-Home Therapist

Family Support and Resource Center, Madison, WI

Duties and Responsibilities: Implemented a therapy program for a nine year old boy with autism to foster the development of social skills; utilized sign language to increase communication abilities; acquired skills for working with people with severe disabilities

Supervisor: Maggie Boyd, mother of boy with low-functioning autism

INTERNATIONAL EXPERIENCES

Spring 2005

London Metropolitan University, London, England

University of Wisconsin-La Crosse Study Abroad Program

Living and traveling independently around Europe and Africa allowed me to develop a passion for global cultures through interactions with individuals of various ethnic, racial, and religious backgrounds.

Winter 2006

Casa José Coltro, São Paulo, Brazil

Individual Volunteer Initiative

Through a self-initiated trip to São Paulo, we were able to volunteer at a children's shelter and educational program in the slums of the city. The program aims to teach children who lack opportunities to attend school and to foster in them life skills so they may enter into Brazil's adverse job market.

INTERNSHIPS

October 2006-
January 2007

Children's Education and Activity Program Intern

People Serving People, Minneapolis, MN

Duties and Responsibilities: Planned, organized, and implemented educational activities that also promoted social and behavioral skills; supervised tutors; orchestrated tutoring program
Supervisor: Kelly Stillman, Education and Activity Coordinator

PROFESSIONAL PRESENTATIONS

Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., Reddy, M., **Duffy, C.**, Rath, M., & Courage, C. (February, 2008). Prospective predictors of in-theater post-traumatic stress symptoms in a cohort of National Guard soldiers deployed to OIF. Paper presented at VA Health Services Research & Development National Meeting, Baltimore, MD.

Erbes, C. R., Polusny, M. A., Rath, M., Courage, C., **Duffy, C.**, Reddy, M., & Thuras, P. (February, 2008). Psychiatric distress in a cohort of deployed National Guard soldiers. Paper presented at VA Health Services Research & Development National Meeting, Baltimore, MD.

Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., Murdoch, M., Kehle, S., Seifert, A., **Duffy, C.**, Rath, M.B., & Courage, C. (February, 2007). Impact of previous combat exposure on psychiatric symptoms among male and female National Guard troops prior to deploying to Iraq. Poster accepted for presentation at the Health Services Research and Development National Meeting, Washington, DC.

Polusny, M. A., Erbes, C. R., Arbisi, P. A., Thuras, P., Courage, C., Rath, M., Seifert, A.E., **Duffy, C.**, & McCormick, C. (November, 2006). Pre-OIF deployment personality and distress in a sample of National Guard troops. Poster presented at the 22nd Annual Meeting of the International Society for Traumatic Stress Studies, Hollywood, CA.

SPECIALIZED CERTIFICATIONS

September 2006 **Extensive Domestic Violence Education and Crisis Training**
Domestic Abuse Intervention Services, Madison, WI

September 2007 **Phlebotomist Certification**
Veterans Affairs Medical Center, Minneapolis, MN

VOLUNTEER EXPERIENCE

July 2006-
May 2007 **Children's Activity Associate and Tutor**
People Serving People, Minneapolis, MN
Duties and Responsibilities: Lead homeless children ages 3-17 in various educational and social activities; tutored homeless elementary-aged children
Supervisor: Bridget Sanders, Community Integrated Services Associate

October 2006-
April 2007 **Let's Prevent Abuse Program Volunteer**
PACER Center, Bloomington, MN
Duties and Responsibilities: Performed puppet shows for a diverse population of elementary school children to promote abuse awareness and develop safety skills
Supervisor: Lynn Dennis, Let's Prevent Abuse Coordinator

September 2005-
June 2006 **Support Group Facilitator**
Domestic Abuse Intervention Services, Madison, WI

Duties and Responsibilities: Offered support and education to a diverse population of women; acquired listening and facilitation skills; received extensive crisis response training

Supervisor: Erin Osmond, Support Group Coordinator

REFERENCES

Melissa Polusny, Ph.D., L.P.

Staff Psychologist, Post Traumatic Stress Recovery Program

Minneapolis VA Medical Center

Associate Professor, Department of Psychiatry

University of Minnesota Medical School

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Christopher Erbes, Ph.D., L.P.

Staff Psychologist, Post Traumatic Stress Recovery Program

Minneapolis VA Medical Center

Assistant Professor, Department of Psychiatry

University of Minnesota Medical School

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Ann Masten, Ph.D.

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